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ORGANIZATION OF HEALTH SERVICES  
UNDER COMMUNIST CHINA'S COMMUNE SYSTEM (II)

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ORGANIZATION OF HEALTH SERVICES  
UNDER COMMUNIST CHINA'S COMMUNE SYSTEM (II)

[These are full translations of six articles appearing in Jen-min Pao-chien (People's Health), Vol 1, No 7, 1 July 1959 and Vol 1, No 9, 1 September 1959.]

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REPORT ON A SURVEY OF DAY NURSERIES AND  
KINDERGARTENS IN THE LIAO-SHEN PEOPLE'S COMMUNE

[The following is a full translation of an article written by the Mukden Health and Epidemic Control Station, appearing in Jen-min Pao-chien (People's Health), Vol 1, pp 668-669, 1959.]

To meet the requirements of new developments in the establishment of socialism and in the great leap in agriculture and industries, as well as in the communization of the whole country, the Mukden Municipal Health and Epidemic Control Station and the Department of Hygiene of Mukden Medical College formed a joint team, using day nurseries and dining halls as centers of work; we made a survey and helped the Liao-shen People's commune in northern Mukden in exterminating the "four pests" and in preventing disease.

The following is a report based on the survey we made on the day nurseries and kindergartens from mid-November to the end of December of 1958.

### I. A Brief about the Commune

The Liao-shen People's Commune was established at the end of September 1958. It consists of the two streets of Liao-shen and T'ao-ch'ang, the two ts'un of Shen-hai and Tung-shan, and is divided into 16 administrative areas. This commune has combined five major professions, namely: agriculture, industry, commerce, education and military service into one integrated system.

Vegetation is the main agriculture. The main industries in this area are national special industries. In addition, there are 34 factories run by the commune itself. engineering factories, garment plants, molding factories and mills, etc. The majority of the factory workers are women.

The whole commune has a population of some 83,000 persons in some 15,000 families. There are 18,306 children under the age of seven, of which 9,231 are under three

years old and 9,075 are between the age of four and seven. This commune has now 28 day nurseries and 22 kindergartens. They take care of 4,355 children.

All work in the commune is under the leadership of Party committee members. There is a chairman in the commune. There are several departments under him taking care of different kinds of work. The day nurseries and kindergartens are under the direction of the Department of Welfare and Health of the commune and the sub-divisions of these two departments in each area.

In general, although there are still some problems in these newly established nurseries and kindergartens, they are certain to have a great effect on the release of the labor force for the increase of production.

## II. The Results of the Survey

The following is the result of the survey which we have made of 18 nurseries and 13 kindergartens--all are for day time use. We inquired into or inspected those items such as the selection of location, buildings and facilities, sanitation, nutrition, education, etc.

1. The selection of locations for the nurseries and kindergartens of this commune is based on the convenience of the local situation. They use private homes, or repair old buildings or build new ones for this purpose. However, some factories have the nurseries and kindergartens right next to the working buildings. This is in one way very convenient to take care of the children, but the noise, the shaking sound, and all kinds of dust from the factories are not good for the health of the children. It is also dangerous for the activities of those children.

Some of the nurseries and kindergartens have rather poor circumstances, such as open drains, garbage piles, etc. But some of them are too far from the places where the babies' mothers are working. They cannot feed babies their milk on time, thus reducing the lactation of mothers.

2. Of all the nurseries and kindergartens, 87 percent (27 out of 31 of them) selected those buildings which face south. This will give children enough sunshine and better light in-doors. Of these 35.7 percent are isolated buildings. This is important in preventing and controlling contagious diseases of the children.

Most of the buildings have dirt floors. It is inconvenient to spray water and to keep them clean. It also produces dust. This is not good for children to play on indoors. Only a few of them have wood floors, which are better insulators and easier to keep clean.

Four of those buildings originally had sandy ground floors, which were later converted into solid concrete ground floors. This is a simple and economical method. It also makes the cleaning job easier. Some of those buildings are not very good for nurseries, but they may be useful for kindergartens.

3. It is important to maintain fresh air inside the nurseries and kindergartens. Each child in the room shares an average area of three square meters. During the cold days, when the windows are closed and pasted with papers, the ventilation is not so good. Under such conditions, air pipes can be used to increase the ventilation. It also keeps the room temperature fairly constant.

4. The nurseries of this commune have the minimum of facilities for warmth and sanitation, and making beds, etc. However, they are still short of thermometers, toys, and uniforms for nursery workers. Four different methods are used to keep the rooms warm.

Four nurseries use steam, four others use heated walls, twelve use wall fire places, two of them use stoves, and the other six of them apply some other method. From the sanitary point of view, steam is best. But we cannot all have that at present.

According to the local conditions and the habit of the people in this commune, the wall fire place appears to be a convenient method because it keeps a constant temperature in the room, and has less danger of accidents. But it is not very economic, since a great deal of heat escapes out through the pipe. The use of stoves makes the

air in the room awfully dry and gives uneven temperatures and therefore, children are more apt to catch cold.

Besides, it is much easier to have accidents. Under the present conditions, using stoves to keep rooms warm is not a good method, due to the fact that we have not yet worked out a sound system in correlating the nurseries with many other kinds of work in the commune.

In general, three kinds of beds are used. They are wooden beds, and fire-warmed brick or wooden beds. Two-thirds (12) of the nurseries use fire-warmed brick beds, the other one-third (6) use wooden beds. The conditions in the kindergartens are not so good. A third of them still do not have warming facilities for beds. Another third of them use fire-warmed brick beds. One place uses wooden beds and three other places use fire-warmed wooden beds.

It appears that most of them use fire-warmed brick beds; this is a common habit of people in northeast China. According to the working schedule of the parents, most babies are left in the nurseries about 10 hours a day, while some of them have been there for 12 hours. Some nurseries still warming facilities in the beds which will affect the growth of babies. This condition must be improved.

Each child has a personal towel. But some of the towels do not have any mark for recognition and sometimes they are mixed up. Some of them cannot get biiled and sterilized every day. There are not enough wash bowls. Each division is preparing running water buckets. Because of the shortage of rooms, most of the nurseries do not have isolation and play rooms. Some of them borrow the spare rooms of childless old people as isolation rooms.

Whenever any contagious disease is found in the nurseries, the patient is sent to the isolation room immediately. Inspite of the short experience and the simple facilities of the nurseries, they have been built up almost single-handedly. Moreover, they have satisfied the need of great number of members, especially women, in the commune.

## 5. Administration

i. There is no set regulation of an age limit for admission to the nurseries. Very often babies less than one year old are mixed with children of six or seven years old. This deficiency calls for the urgent improvement in the dividing of children into proper age groups. There is also no definite time of accepting and releasing children. There is no immediate information about those children who are absent on a specific date.

In addition to these facts, there is a neglect of the health examination of the children in the nurseries.

ii. The office hours are about ten hours a day. Children in the kindergartens are provided with lunch. They have their breakfast and supper at home. In the nurseries, working mothers usually go to feed their babies milk during the rest period. They are not fed at the same time. There is also insufficient sanitation in milk feeding.

Although all of them now have adopted some simple living schedule for children, some of them are doing quite well, others are not so. In the kindergartens, young women with singing talent have been selected to be the health workers. They teach children singing and playing every day.

iii. In regard to the physical examination every morning, there is a shortage of thermometers. Mostly, the workers just feel the children with their hands if they may have some fever. There is no adequate facilities for personal hygiene and more detailed physical examination. Some of the health workers are able to find out the illness of children as soon as possible simply by observing, inquiring and feeling, and isolating them and giving them treatment immediately. They solve many problems by this primitive method. They make detailed records after examination.

All health workers are women. Very few of them have had this kind of work before. Most of them are between the ages of 20 to 50, and have been working for two to three months.

The majority of them have a few years of primary school education, and some of them have had none. Since they started this work recently, they are still unfamiliar with the sanitary and health knowledge, especially in the prevention of contagious diseases, although many young mothers have had plenty of experience in feeding children. Each health worker in the nurseries takes care of from five to ten children. Only few of them take care of from 11 to 15 children. The health workers in the kindergartens appear to be over loaded. About two thirds of them are taking care of more than 10 children each.

### III. Suggestions for Improvement

The problems which the nurseries and kindergartens of this Commune are facing are almost inevitable to the early stages of the Commune system. They will be solved gradually as the Commune is established. Under present conditions, three basic requirements should be achieved; these are: (1) the necessity of the efficient prevention of childrens' diseases, especially the contagious diseases such as measles, scarlet fever, whooping cough, diphtheria etc.; (2) the necessity that children should have their normal growth and sanitation habits; (3) the necessity that mothers should be given complete relief from their children while they are participating in production work.

The following are a few things that can be used as guidance.

1. The selection of site: (i) The environment must be good, and avoid any place which has an open drain or garbage pile; (ii) the locations of nurseries and kindergartens must be selected in the center of each administrative area or in the vicinity of those families where most children come from and (iii) consideration should be given to the available area for further expansion in the future.

2. Buildings: (i) Nurseries and kindergartens ought to be separated from other buildings and face south or southeast; (ii) the wooden floor is the best kind, tile-paved floor is good also; if neither of these can be

provided, at least a concrete floor must be made (iii) a good ventilation in the room is required, and permanent air pipes or ventilation windows can be built.

3. Installation: (i) Any of those warming devices such as fire-heated walls, stores, and fire-warmed beds can be used according to local conditions, but there must have precautionary facilities such as iron or wooden fences for protection; (ii) for prevention of contagious diseases, running water vessels can be made for washing; each person must have a personal towel with a mark or name on it which is put systematically on different levels of strings, thus giving each one adequate sanitation; (iii) there must be facilities for resting and sleeping; (iv) some simple toys must be bought or made; (v) there must be enough essential things like medical thermometers, room thermometers, drinking equipment, commodes etc.; (vi) according to the local conditions, some isolation rooms must be built.

4. Establishment of a practical and ideal, sound administrative system: (i) Each child must have a physical examination and a complete medical history prior to admission to the nursery or kindergarten; there must be age limitations, from two months to three years old for the nursery and from three to seven years old for the kindergarten; the kindergarten children should at least be further divided into two groups, i.e. from three to four and from five to seven years old. (ii) A living schedule must be set up and children must be trained to have good living habits. (iii) A routine norming inspection on the illness of children and sanitary conditions must be practiced, and those who suffer from or suspected to have contagious disease must be isolated immediately. (iv) Records must be made about changing of duty of workers, attendance of children, reasons of absence, measles susceptible to children, etc., (v) the sanitary conditions of health and sanitary workers.

5. Health workers must be selected from those young women who are reliable politically. If some women have the latter qualification but are a little older, they can be given some suitable jobs. Before the health workers begin to work, they must have their physical examination, and some training about child care, hygiene, and the prevention of contagious diseases. While they are working, a further training should be continued in order to increase their knowledge of health.

AN APPRECIATION OF SIMULTANEOUS SURVEY  
AND TREATMENT OF FILARIASIS, MALARIA, AND  
HOOKWORM DISEASE IN THE T'U-CHU PEOPLE's  
COMMUNE OF LO-SHAN HSIEN, SZECHWAN PROVINCE

[This is a full translation of an article written by the Szechwan Provincial Health and Epidemic Control Station. The article appears in Jen-min Pao-chien (People's Health), Vol. pp 663-664, 1959.]

The T'u-chu Hsiang of Lo-shan Hsien is a mountainous area of about 160 square miles. Approximately 85 percent of it is made up by low hills, and 15 percent by high mountains and plateaus. There are 8,947 persons in 1,868 families living throughout this area. According to a survey of major points, 22.3 percent are infected by Filaria, and 80 percent by Hookworms. A good number of them have suffered from malaria. The people there are endangered by these three kinds of diseases, and they urgently ask for their extinction.

Since the mid-November 1958, under the guidance of the Party Committee members in the Commune, the Secretary took the lead. They trusted the people and taught them the skill, 47 health workers were trained. Within a period of 15 days they have finished a general survey of the three above mentioned diseases among 5,480 persons who were at home in the whole Hsien. A total of 377 of them were found to be infected by day-time microfilaria, and 1,162 of them were infected by Hookworms. From 1957 to 1958, 537 persons suffered from malaria. They all have received treatment. From this work, we have the following experiences:

1. Enforcement of guidance under the Party is the basic safeguard for the achievement of all kinds of work. This has been sufficiently proved by the elimination of Filaria disease in the T'u-chu People's Commune. In order to achieve the elimination of Filaria disease within 12 months, as decided by the Party Committee members of the Hsien, the Party Committee members of the Commune immediately called the Party members and clerks in the Commune for a meeting to discuss this problem. They participated actively in this work and mobilized the people.

After the beginning of this work, this was done with collaboration in productive work. Whenever there was a problem, they studied it and solved it. For instance, some clerks at first thought that there were some conflict between the elimination of diseases and the production program, so they did not work seriously on the former one. The Party Committee members found out this problem, and they immediately called a meeting of all Party members and clerks in the Commune. They discussed the problem and finally unified thinking. Thus they enabled the movement to be carried on smoothly. Moreover, the elimination of Filaria disease was achieved twenty days ahead of time.

2. Train public health workers, trust them with the skill, and make them as the fundamental force for the elimination of the three diseases. The public health workers were selected in each Sub-commune or dining hall from those young men or women who were politically reliable, hard working, with at least a few years of primary school education and respected by the people.

During the training period, the main items were the inquiring into medical history, making blood smear slides, and giving medicine. Along with these was the knowledge of disease transmission and prevention. They were given simple, concise and easily remembered practical skills. For example, in diagnosis, the differences between malaria and the Filaria fever, elephantiasis and the skin diseases due to the infection of Hookworms were pointedly explained to them. In the treatment, the five kinds of patients as edema, paleness, pregnant women, vomiting blood, and ascites are put under the category of "five don't treat" diseases, and they are not given any treatment.

The drugs are recognized according to the form of medicine, and the size and color of the tablet. Also a list of dosage according to the age of the patient was given then as a reference. They drew blood from each other to practice the preparation of blood smear slides until they were entirely familiar with the techniques.

When they first began to work, they worked under supervision. Gradually, they were able to work quite correctly in the survey and treatment of those three diseases. Later on, this work was combined with the prevention and the treatment of the seasonal contagious diseases in that

Commune. They were given regular short periods of training, thus increasing their multiple skills. This improves the public sanitation, protects the production, and also enhances the prestige of the public health workers. Their co-ordination with the physicians is strengthened. Therefore, they have gradually become rooted and established among the public.

After three months' practice, we feel that there are five advantages for having public health workers:

- (1) The members of the Commune are familiar with the place where they live; especially, when they have to draw blood in those mountainous areas, at night, they can get there by the shortest way.
- (2) They are familiar with the people, and it is convenient for the clerks in the Commune to discuss the work frequently with them. They know the thinking and the activities of the people, so they can penetrate deep into them and solve their difficulties and worries.
- (3) They know the language, and it is convenient for them to publicize the sanitary work to the people.
- (4) They clearly understand the production and other activities in the Commune, so they can make good schedules in co-ordinating with the production work.
- (5) They know the changing of workers on time, so they can diagnose and treat the patients immediately.

3. Act to exterminate the Filaria, malaria, and hookworms simultaneously with the same group of public health workers. For instance, when they were making the micro-filaria blood smear slides, they were investigating the symptom of hookworm disease and the medical histories of the patients. Accordingly, the drugs were given to the patients at the same time.

The Filaria is treated with 1200 mg. of hetrazan per day (divided into two: first time, 400 mg; second time, 800 mg.). The malaria is treated with chloroquine, by taking 30 tablets of it at the same time. The hookworm is treated with carbontetra-chloride, 4 to 5 ml. each time per day (the above dosages are for the adult). If the patients have both malaria and Filaria or hookworm,

they receive both kinds of drugs at the same time. They do not show any serious side reaction. If a patient has Filaria and hookworms, since the hetrazan can treat both of them, no additional hookworm drug is given. We consider that this way we can save much labour and materials, if we make the survey and treatment of those diseases separately. It also facilitates the arrangement of the overall schedule of the elimination of diseases and other major kinds of work in the Great Leap program. People get a good impression. They are eager to work. Therefore, they say that this is a good method of "more products, faster, better, and save," the four principles of work.

4. The treatment of Filaria with hetrazan has various degrees of side reaction, especially in the case of Wuchereria malayi infection. Generally the patients need one to two days of rest. In a large scale treatment, for the convenient of the patients, we adopted two methods. We sent drugs to the individual homes or gave them in the dinning hall. We found that the latter method was better. The reasons are as follows:

(1) It is more convenient to take care of the patients, and it reduces their fear of having the side reaction from the drug, and sleeping at home alone.

(2) It can greatly increase the efficiency of work. When we delivered the drugs to individual homes, one public health worker could only treat and take care of the side reaction of the drug of about 15 patients in a half day. But when the patients were concentrated in one place, each public health worker could take care about 50 patients in a half day. The result of this work is more than three times as efficient.

(3) With the scattered treatment, most of the patients need at least one person to take care of them individually. When they are gathered in the same place, it requires fewer people to take care of them. Besides, they feel confident to go to work. This will prevent hinderance of production because of the treatment of diseases.

5. Sanitary education is widely introduced to the public. The prevention and the treatment of diseases is a kind of massive work in itself. Everybody must have this kind of knowledge in order to achieve this work. This publicized work must cover widely and penetrate deeply to

the people. T'u-chu People's Commune has brought people together in the same dining hall, and to work in the same field. Beside oral introduction, posters, and newspapers, people were shown at night the living microfilaria under the microscope, so they would realize why it was necessary for them to have the blood examination even they did not seem to have any visible physical symptoms.

When explaining to the people about the diseases, it is important to answer their main questions. Such as, they may wonder why a "healthy" person has worms in the blood? Why it is necessary to draw blood at night? Those questions have to be answered clearly to them. Otherwise, they may still have doubts in their minds; and therefore, are not willing to have diagnosis and treatment, consequently, the work will be greatly hindered.

REPORT ON THE PREVENTION AND TREATMENT OF HOOKWORM  
DISEASE IN THE HSI-PU PRODUCTION BRIGADE OF SHAN-T'ING  
PEOPLE'S COMMUNE, PU'U-T'IEN HSIEN, FUKIEN PROVINCE

[This is a full translation of an unsigned article which appears in Jen-min Pao-chien (People's Health), Vol 1, pp 665-667, 1959].

The Hsi-pu Production Brigade is located in the south east of P'u-t'ien Hsien. The eastern, western and southern sides of this area are surrounded by the sea, forming a small peninsula. It has a sub-tropical oceanic climate. The average temperature from April to October is 25.2°C. The average precipitation in a year is about 1000 millimeters. The relative humidity is above seventy percent.

More than ninety-five percent of the tillable land is in dry land crops; among them the tomato plantation is the most important one. Both the climate and the vegetation there are suitable for hatching of the hookworm eggs and survival of hookworm larvae. Besides, after the prolonged rule of the reactionary Kuomintang regime, people were poor and lacked sanitary knowledge. Farmers were working in the fields bare-handed and barefooted. Children stooled freely. The fresh manure was used as fertilizer. All fresh manure was used as fertilizer. All these factors caused the epidemic condition of the hookworm disease there.

According to some old farmers, there was a very severe epidemic eighteen years before the Liberation, and every year there were five to six hundred sufferers of hookworm disease in this area; therefore people referred to this place as a "sick devil's Ts'un".

After the Liberation, a series of preventive and treatment works on hookworm disease have been carried on under the correct leadership of the Party. In 1958, the Party Committee members emphasized production and launched a mass movement. A total of 87.56 percent (2,542 persons) of the whole population (2,903 persons) in this T'sun received fecal examinations. There were 1,842 of them positively have hookworm disease. They all received treat-

ment. Those who suffered from more severe infection were reexamined and given a second treatment. The patients were then relieved from the suffering of the disease. Attendance at production work was much increased. Everybody began to be full of strength. The melancholy of the "sick devil's Ts'un" disappeared forever.

### Prevention and Treatment

An epidemiologic survey was made before the beginning of the preventive and treatment work. Planning was formulated, aiming at the treatment of patients, control of manure and individual protection; three main objects. The following is a report of such work.

#### I. Treatment

(1) Methods of treatment: Among those 1824 persons who suffered from severe hookworm infection, 1749 of them received their first treatments between February and March. In September, 792 of them were re-examined and 467 of them (57.7 percent) were still found to have severe infection. A total of 336 of those patients were given a second treatment.

Two methods of treatment were used:

(a) Patients were called together in the morning before the breakfast for an inquiry into their symptoms and medical histories, and also for the test of their hemoglobin content in the blood. Those who did not have any other disease affected by the worm killing drugs were all given the treatment. After taking the medicine they were asked to remain there for one hour. If no sign of reaction was found, they were allowed to go home. If some one was found to have some reaction to the drug, a longer rest or special treatment was given.

Some of them were allowed to take medicine home after the physical examination. They took the drug at seven or eight o'clock after supper. Next morning they were examined on the reaction of the medicine at home, and proper treatment was given if necessary.

(b) The other method was to deliver medicine to patients at home, watching them taking it. Next morning inspections were made for the possible reaction to the drug.

(2) Drugs and their usage:

i. First treatment. - Three milliliters of carbon tetrachloride in capsule form were given to the adult at one time. The dosage for children were reduced according to their ages and physical conditions. In addition to this, some of them were given purgative and calcium tablets, but some of them received only calcium tablets. A kind of Chinese shrub medicine, Lui-wen powder was given 60 grams three times a day in combination with glucose to adjust the side reaction.

ii. Second treatment.- The drug used was mainly carbon tetrachloride. Two dosages were given, 3 and 4 milliliters, for the purpose of comparing the extent of side reactions and the efficiency of treatment.

(3). The results of treatment:

i. First treatment: Fecal examinations were made within 24 hours after the first treatment. The number of hookworms discharged was counted in each case. The average number of worms discharged by taking carbon tetrachloride alone was 3.51, that by taking carbon tetrachloride and purgative was 14.25, and that by Liu-wan powder was 0.35.

ii. Second treatment: Among those 336 persons who had received the second treatment, 245 of them were picked up for the observation of side reactions. There were 158 of them took 3 milliliter each of carbon tetrachloride; out of them, 129 persons or 81.64 percent of them were found to have side reactions. When a four milliliter dosage was used, 81 out of 87 persons or 93.1 percent were found to have side reactions showing the latter dosage number of hookworms discharged by using a three milliliter dosage was 0.87 and that by a four milliliter dosage was 2.64. The diminishing of hookworm ova by using 3 and 4 milliliter dosages was 49 and 78.76 percent respectively.

II. The control of manure

This is the most important part in the termination of hookworm disease. Under the leadership of Party Committee members, we were mobilized to reconstruct 51 modern men's

and women's toilets from 444 old ones. Covers were made for 60 cesspools of human refuse, and for 33 cesspools of manure and green fertilizer.

All these were done within ten days. Thus we have achieved the basic requirement in the termination of hook-worm disease by using covered toilets and cesspools, also by keeping manure for a definite period of time before using that according to the plan.

1. The basic principle: Consideration is given to the living environment and production work. Human and animal refuse is kept separately, and this will provide the immediate demand for fertilizer during the tilling season. Cesspools must be covered. The covers must maintained at a certain degrees of slope. No water should be added to the cesspools. Children should be taught and disciplined not to stool freely any place.

2. The working process: Having support from the Party and the administration in that local area, a working procedure was planned according to the main principles stated above, as a guide for this mass movement under the direction of the Party Branch.

i. Call the public to discuss some hesitative problems such as the worries of spending the effect on production work, the materials, the effect on fertilizer etc. Unification of thinking is the foundation for any public work.

ii. Under the leadership of the secretary of the Party Branch, a special term was formed for this work. They are in charge of studies, planning, inspection and reporting. Besides, schools and other institutes are responsible in the health education campaign; the Supply Department gives the materials, and the Health Stations conduct the technical work. Therefore each group and level shares some responsibility.

iii. Make a survey down to the bottom from some starting points, then to the whole area through a thorough campaign by a sound organization. The main purpose of this is to find out the distribution, the number and the quality of the cesspools, and the sources of stones, sand and soil, which are found in them. After that we can decide which cesspools have to be destroyed or rebuilt.

iv. According to the financial situation of our Commune, the ease of getting materials for rebuilding, the further expenditure of the program, and for the convenience of usage, we rebuilt three types of toilets and cesspools. (1) 51 covered toilets were reconstructed from the old ones, and 30 to 40 men or women share each of them. (2) About 60 shih tan or human refuse is collected daily, therefore, 60 cesspools are prepared for that. Each one is covered with a certain slope to prevent water from getting into it, so that the strength of fertilizer may be reduced and the survival of hookworm ova be prolonged. (3) 333 cesspools were rebuilt for animal manure and green fertilizer.

Human fertilizer is required to be kept from ten days to a half month in summer or in autumn and from one and a half month to 60 days in winter or in spring before use. The number of hookworm larvae was found to be reduced to 13.82 and 11.09 percent after keeping the human refuse for 7 and 14 days before use respectively.

### III. Individual protection

Before the treatment of hookworm disease and the effective control of manure has been achieved completely, and individual protection is a very important work. Farmers are urged to wear rubber or cloth shoes in the fields, especially when working in the tomato plantation during the infectious season. We also prepared some repellent chemicals such as potassium sulfite solution, turpentine and potassium sulfite mixture, saturated alum solution etc. and tried to use them for protection.

### Results and Experiences

#### I. Treatment

1. The comparison between carbon tetrachloride and Chinese shrub medicine, Lui-wen powder: The average number of hookworms discharged by carbon tetrachloride is 3.51, and that by Lui-wen is 0.35. The number of hookworm ova is reduced by 87.53 percent by carbon tetrachloride, but it is somewhat increased by taking Lui-wen. These indicate that the former drug is better than the latter in hookworm

treatment. But one cannot deny the usefulness of Lui-wen in this case simply because the number of hookworm ova appeared to increase to a certain extent. This only can serve as a kind of data since the hookworms do not lay eggs so regularly in the human body.

The more reliable criterion for the comparison of the effect of these two drugs seems to be the number of hookworms gotten rid of by them. From our observations, in this respect, carbon tetrachloride is ten times more effective than Lui-wen. But the former has a strong side reaction, the production of that drug is still not much. For these reasons, Lui-wen can still be used as one of the hookworm drugs. Lui-wen is not suitable for children, and it requires some improvement.

2. The combination of carbon tetrachloride with purgative: This must be decided by the extent of the side reaction and the effectiveness of these drugs. According to our observation, there is not much difference in the side reaction whether carbon tetrachloride is used with or without purgative; but the average number of hookworms discharged by carbon tetrachloride alone is 3.51, while that by the combination with purgative is 14.25. These results were based on the observations from 122 persons who took carbon tetrachloride alone and from 101 persons who took that with purgative. It is obvious that the combined medicine is more effective.

3. The combination of carbon tetrachloride with calcium tablets: The purpose for using calcium tablets is to reduce the side reaction of carbon tetrachloride. We divided the patients into two groups for this test. There were 76 persons given carbon tetrachloride with purgative plus 1.5 grams of calcium tablets; 161 persons were not given calcium and served as control. In another group, 97 persons were given carbon tetrachloride without purgative but with 1.5 grams of calcium tablets also; 122 persons served as control for this group.

The results show that calcium reduces the side reaction a little in the moderate patients in the first group, but it enhances the side reaction in more severely infected patients. Calcium has no effect on the second group of patients. Therefore, it seems unnecessary to use calcium tablets in this treatment.

4. The different dosages of carbon tetrachloride and their side reactions: From our observations of the double tests, the number of patients who were found to have side reactions the first time was doubled when the dosage was increased from three to four milliliters. In the latter case some patients appeared to have severe side reactions.

In the second test, the number of patients who did not have a side reaction was found to be 18.35 and 6.98 percent in the above two groups. It can be concluded that the side reactions are stronger and more commonly found among patients when the four milliliter dosage is used, and sometimes the reactions were very sudden.

5. The effectiveness of different dosages of carbon tetrachloride: Since the cases in this study were comparatively few it was difficult to make any definite conclusion. From the observations we obtained the average number of hookworms discharged by taking the three milliliter dosage as 0.87 and that by the four milliliter dosage as 2.64. The number of hookworm ova reduced by the three and four milliliter dosages was 63.49 and 78.76 percent respectively. It seems that the heavier dosage is more effective.

## II. The control of manure

1. We owe to the leadership of the Party, that the public was mobilized to improve the toilets and cesspools with the materials they could get. As a result, there was very little spending, and only .15 yuan was spent for each cesspool. After the manure was kept for 14 days, the number of hookworm ova reduced by 88.91 percent. Thus the chances of infection are much less. So we have achieved a basic preventive work.

2. Some practical rules must be made to keep the cesspools covered and closed for a certain period of time. People should be encouraged to participate in this work voluntarily, and to observe each other in order to achieve this purpose.

3. The control of manure must be done in co-ordination with the productive work. A plan should be made for the use of fertilizer according to the cultivating seasons.

4. Sometimes we need fertilizer immediately but the manure available has not been kept long enough. Under such circumstances, we try two methods. The one is to mix the manure with some chemicals in order to kill the hookworm ova, but this method is not very good because it is expensive and may ruin the fertilizer or the soil. The other method is to mix the manure with wild green plants. This is much easier to do. It needs very little or no money at all and it does not ruin the fertilizer. The wild plants we have tried are: K'u-lien, Lui-teng, Fu-shou, Lung-she-lan and Tuan-ch'ang grass. They are used individually or as mixture. The results show that K'u-lien is more effective in killing the hookworm ova than the rest. The ova were killed in 96.18 to 98 percent when fresh K'u-lien juice, in 10 to 30 percent concentration, was mixed with feces for seven days. This finding is worth recommanding.

### III. Individual protection

We found that the saturated alum solution was the most convenient chemical used as a hookworm larva repellent. This can be widely used in those areas where the control of manure has not been achieved completely.

IV. In order to make a general survey of hookworm disease with the fastest, most economic and good method, we tried to diagnose by inquiry instead of fecal examination. In the epidemic area, those who ever have had "itchy ground" feeling are considered to have been infected. We examined 95 of them and 80 percent were confirmed. Of those who do not have such a medical history, faecal examinations are necessary.

It is not reliable to diagnose by listening to the heart beat and weakness of breathing alone. By adopting this method the time needed for us to finish a general survey was much shortened.

In conclusion, the treatment and preventive work of hookworm disease at Hsi-pu, under the leadership of Party Committee members in the Commune, and the participation of

all people, has achieved a great deal in the treatment, control of manure and individual protection. We have obtained some experience and found a proper way to carry out a large scale campaign of this kind.

MEDICAL EXPENSE INSURANCE SYSTEM  
PRACTICED IN THE NAN-KUAN  
ADMINISTRATIVE DISTRICT OF THE  
CHO-CHOU CHEN PEOPLE'S COMMUNE,  
CHO HSIEN, HOPEH PROVINCE

[This is a full translation of an article written by the People's Commune of Nan-kuan Administrative District of Cho-chou Chen, appearing in Jen-min Pao-chien (People's Health), Vol 1, pp 858-859, 1959.]

This whole District consists of ten Ts'uns and eight Production Brigades. It has a population of 4,397 persons. There are 740 full production men, 788 full production women, 231 half production men and 260 half production women. Two medical institutes have been established, the Nan-kuan Health Center and the Chuang-t'ou branch Health Center and they have four doctors of Chinese medicine, a doctor of western medicine and a pharmocologist.

The protection of the health of members in the Commune is a very urgent matter. According to a study by the Party Committee members in the Hsien and in the Commune, a medical expense insurance system was introduced from March 1959 as follows:

1. Each member pays .1 yuan each month for the medical fee. Those who are under seven or over sixty years of age and "five-protected families" do not have to pay and their medical expenses are provided from the public welfare fund of the Production Brigades. If there is any deficit in that month the balance will be made up by the members according to their production quota.

2. There is .05 yuan collected from each patient in the Out-Patient Department for miscellaneous medical expenses. For the home patient, if the case is a severe one or a serious contagious disease, the treatment is free; if it is only a milder one the patient has to pay .2 yuan, so those who really need treatment will not be affected.

3. The patients take medicine according to the orders from the doctors; they are not supposed to ask for any drug by themselves. This will reduce waste and mishaps.

4. Patients from outside of this District pay an additional fee of .1 yuan.

5. Doctors in the Health Center have to go to the Health Stations in a rotation schedule, so that the patients can have their treatment on time.

6. Any member who wants to receive treatment outside this District has to pay by himself. In case some patient has to be transferred to another hospital outside under the recommendation of the doctor, medical expenses shall be paid by the Health Center of his own location.

7. The medical expense insurance fee must be collected by the 25th of each month by the Health Center; otherwise, they have to pay according to the regulations.

From our experiences the following advantages of this system have been observed:

1. This system solves the problem for those people who do not have money to get medical treatment and also indicates to the great majority of people the advantage of Commune life. For instance, there is an eighteen year old girl at Chuang-t'ou Ts'un, who suffered from lobar pneumonia last March, and none of her doctors could cure her. She was then transferred to the Commune Hospital. After fourteen days she was completely recovered. The total medical expenses were 39.48 yuan, which were covered by the insurance policy.

Also, there was a thirty eight year old Mrs. T'ien of Nan-kuan Ts'un, who suffered from intestinal inflammation in mid June, complicated with severe dehydration. She fainted on the street and was sent to the Commune Hospital. After five days, she recovered. Her medical expenses were 8.82 yuan, which were paid by the insurance. There are many other examples like these.

2. Preventive work must be considered as the main object. Once the illness is found it must be treated immediately. This will safeguard the health of all members of the Commune and increase attendance in production

work. For instance, there were sixty six absentees due to illness in the January. Fifty two of them (78.3 percent) received immediate treatment. Since the beginning of the medical insurance system in March, 103 persons were found to be sick, and all of them received medical care immediately. The attendance at production work increased from 77 to 82 percent.

3. It reduces the burden on the leaders and avoids delay of treatment due to administrative procedure or lack of money of the patient.

4. Under proper guidance of superior officials, doctors have gradually improved their thinking. They are doing better work than before. During the summer harvest season, they bring medicine to the field. In ordinary times, they routinely visit every Ts'un in this District for treatment. This will avoid the difficulty of the patient in sending for a doctor and getting treatment on time.

5. It enhances the spirit of Communism. There is a mutual assistance between member and member, and between Production Brigade and Brigade of the Commune. They will not suffer any financial loss.

Due to the lack of experience and a thorough campaign, some mismanagements and problems were found.

1. In the beginning of the medical insurance system, some officials were afraid that the number of clinical cases might be increased so there would be more expenditures. It was true, in the beginning. But, under the correct leadership of superior Party and administrative officials, a public education on this matter was given and some registration fee for the out patients is necessary for remedying of this situation. After a few months, the expenditure has decreased to a point lower than that at the beginning of the insurance system.

Some members in the Commune considered that it was uneconomic for them to pay .1 yuan every month; but if they were ill they had to pay several months' insurance fee for one treatment, and several years' insurance fee for the hospitalization. Those officials and members of the Commune, after realizing the facts, have greatly changed their former opinions.

2. Because of some mismanagements, the insurance fee is not enough for the expenditure. Especially in May, there were many patients and some more expensive drugs were used. The control was rather loose, and as a result the Production Brigades were under a heavy burden.
3. Although most Brigades are able to collect insurance fees on time, there are three Ts'uns, where the financial situation is not so good, and people there have to be urged at least two to three times each month in order to collect their fees.
4. If many patients have to be transferred to the Hsien Hospital the insurance fee cannot meet the expenses.

The Income and Expenditures  
Between May and June

| Month | Total population per month | Out Patient | Total  | Monthly Income |            |        | Production | Brigade Contribution |
|-------|----------------------------|-------------|--------|----------------|------------|--------|------------|----------------------|
|       |                            |             |        | Insurance fee  | Clinic fee |        |            |                      |
| 3     | 4,797                      | 3,338       | 595.10 | 250.000        | 167.90     | 177.20 |            |                      |
| 4     | 4,047                      | 2,545       | 639.16 | 349.70         | 121.60     | 167.86 |            |                      |
| 5     | 4,167                      | 2,996       | 792.08 | 416.70         | 136.03     | 239.35 |            |                      |
| 6     | 4,178                      | 2,866       | 730.91 | 417.80         | 137.45     | 175.66 |            |                      |

| Total  | Monthly Expenditure |                 |               | Average expense for each out patient clinic |
|--------|---------------------|-----------------|---------------|---|
|        | Drug                | Hospitalization | Miscellaneous |   |
| 595.10 | 510.63              | 60.000          | 24.47         | 0.176 yuan                                  |
| 639.16 | 502.02              | 97.47           | 39.47         | 0.219 "                                     |
| 729.08 | 721.33              | 26.08           | 46.67         | 0.263 "                                     |
| 730.91 | 655.24              | 70.000          | 5.67          | 0.288 "                                     |

Note: Clinic fees from patients outside of this District: 21.40 yuan in March, 30.07 yuan in April; 18.85 yuan in May, and 21.50 yuan in June. They were put into the public welfare fund of the Health Department in this district.

HSIU-YEN HSIEN, LIAONING PROVINCE,  
FORMULATES PLAN FOR PROVISIONAL  
CONTROL OF HOSPITALS AND HEALTH CENTERS

[This is a full translation of an article written by the Hsiu-yen Hsien People's Council, appearing in Jen-min Pao-chien (People's Health), Vol 1, pp 859-860, 1959.]

All Hsien People's hospitals, health and disease prevention stations, medical incorporations and drug stores are nationally run welfares for all people under socialism. In each Commune, the property of Commune hospitals is a welfare of its own.

No matter which level the health institute belongs to, all of them are responsible for the treatment and prevention of diseases, the safeguarding of the health of women and children, etc. A plan for provisional control of hospitals and health centers was formulated in the following June 1959 for the purpose of achieving the Great Leap in agricultural and industrial production.

I. The control of medical treatment

1. All hospitals and health centers must make complete medical records for all the patients treated by the doctors there for future references.
2. Commune hospitals must be built immediately under all possible conditions. Each hospital must at least have five beds for the serious or far away patients.
3. The purpose of using any drug must be for the benefit of the early recovery of the patient. Expensive and nutritive drugs should not be used freely, so that there would be no un-necessary financial burden to the patient, and no waste of medicine. Narcotics should be used according to the regulations of narcotics control, and any favoritism or other illegal usage of such drug should be avoided.
4. For the purpose of effective control of diseases in our Hsien, the reports of the occurrences of disease from all hospitals must be quick and accurate, without delay or repetition or overlook.

5. Any mishaps in the hospitals or health centers must be reported to the Health Section in the Hsien within five days. If any patient has died in the course of treatment, such cases must be discussed in the Party Branch or with the administrative officials.

## II. The control of finance

1. The hospitals and health centers are parts of the social welfare of the Commune. They are included in the budget of the whole Commune or its subunits. They must make a practical and reliable budget based on the hard working principle of any public affair, and submit that to the unit in charge in the Commune for ratification. No over-emphasis is necessary in pressing the self-support, and self-government of profit or deficit. Neither they are required to present any definite amount of profit to the higher office.

Since the hospitals and health centers are public welfares of all people they must do good jobs and be thrifty too. The money they save can be used for the expending of health affairs. But if some of them are in debt, the Commune shall give them subsidies so they can carry on the work.

2. For the ease of running hospitals and health centers those members who owe their medical expenses should pay back by month or by season according to their contracts. If some one in the Production Brigade suffers from a rather severe acute disease, but he has no money on hand, he can have treatment through a letter of recommendation from the Brigade. The Brigade will pay the expenses by the month or by the season.

In case some patients have to be transferred to the Hsien hospital for treatment, that can be done first through a letter of recommendation and paid seasonally later on. Some rather big individual debts can be arranged to be paid on a longer term. If any Commune hospital or health center refuses to recommend the transfer of a patient to Hsien hospital for the sake of ease, or some patients have to be transferred, but the Commune hospital or health center authorities fail to do so, and as a result, the patient dies, they shall be held responsible for it.

3. The prices of all the drugs are in accordance to that fixed by the Health Section. No one is allowed to raise or to lower the price. All drugs in stock, both Chinese and western medicines, and drugs used every day, must be recorded.

At present, there is still some shortage of personnel, and the use of those Chinese drugs with price less than five yuan a shih-chin and some cheap western liquid medicines can be booked in the end of each month.

### III. Administrative Control

1. All hospitals and health centers are under the joint leadership of the Party and the government. There is a chief in each commune, and under him there are heads of different sub-units and cultural and health workers.

2. A democratic system is used in governing the hospitals and health centers. Each of them has an administrative control committee, made up by the chief of the commune, cultural and health workers, the superintendent of the hospital or health center, doctors, nurses, and someone from the production brigade. The number of people in such committees is about seven to nine in the hospital and about five to seven in the health center. When they hold meetings, if it is necessary some patients shall be invited.

3. Great attention must be made in strengthening the political thinking. There shall be no less than eight hours of political lessons and six hours of professional studies per week. Continual discussion meetings shall be held in order to cultivate a strong sense of responsibility and to serve people wholeheartedly. A continuous improvement in quality and quantity of the work should be maintained for the purpose of increasing production. The cooperation between doctors of Chinese and western medicine, young and old doctors, medical personnel and patients, tutors and apprentices must strengthened.

4. The promotion, demotion, and changing of personnel in the hospital or health center must be done through the recommendation of the commune or its sub-unit to the superior office in the hsien for approval to avoid the misuse of working people. Raises of salary have to be

discussed in the administrative control committee in the hospital or health center according the standard wage regulation set up by the government, and submitted through the commune to the hsien for approval also. No promotion in rank or increase of salary is permitted without such action.

5. For the purpose of unified plan and control, the hsien government has the right to change the job of an employee in the hospital or health center in any commune. The subordinate unit cannot refuse to do so.

6. The hsien hospitals, disease prevention stations and health protection stations are in charge of the technical part of health work. They must conduct their subordinate units to improve their work. Commune hospitals have the similar responsibility to health centers in the production brigades.

The authorities in the commune hospitals can plan on the behalf of the commune for the improvement of this work. All health personnel shall be given constant technical training, so they can do better job.

THE PREVALENCE OF MEASLES AND EPIDEMIC  
CONTROL MEASURES IN THE HUANG-CHUANG  
BRIGADE OF TUNG-CHIAO PEOPLE'S COMMUNE,  
CHENG-CHOU CITY

[This is a full translation of an article written by Chia Shan-fu, Liu Tzu-ch'in and Chang Wan-t'ung, appearing Jen-min Pao-chien (People's Health), Vol 1, pp 855-857, 1959.]

Very few reports have been made on a survey of the prevalence of measles in the farm areas in China. The following is a study of this problem in the Huang-chuang Brigade of Tung-chiao People's Commune, Cheng-chou City. Some suggestions for epidemic control measures are made on the basis of this survey.

I. Methods of survey and the sources of information:

Since the first case of measles was discovered in mid-January 1959 in Huang-chuang Brigade, a registration system for the first clinic of each patient with a concise medical record was established in the out patient department of the hospital. Those patients who did not come to the hospital were inspected and registered at home. The diagnosis of measles was mainly according to the history of personal association, fever, upper respiratory inflammation, Koplik's spots and skin symptoms, 362 cases were found from mid-January to early April 1959.

II. The general background:

Huang-chuang Brigade, formerly a hsiang, is about 70 Chinese miles from the center of Cheng-chou City. It is an alluvial plain of Huang River. The climate is dry. There are constant sandy winds. Before the liberation, it was a disaster area. There was either flood or drought. Besides, people were under the ruthless suppression of Kuomintang reactionaries. The farmers were extremely poor.

The educational and sanitary standards were very low. After the liberation, under the vigorous leadership of the Party and Chairman Mao, the living standard of farmers has been greatly improved. Since they were so poor formerly, their present condition is still comparatively less satisfactory than that in most other parts of Cheng-chou City. The Huang-chuang Brigade consists of Huang-chuang, Huang-kang-miao, Hsiao-ching-chuang, Sun-kang, Hou-niu-kang, Kan-tzu-li, Jen-chuang, San-pa, and Liu-chiang. It has a population of 4,538 persons.

### III. The survey and analysis of epidemiology:

1. The spread of disease: The first two cases of measles were found at Liu-chiang ts'un in mid-January 1959. The disease spread to the neighbour ts'uns. There were 18 reported in the end of January. The cases increased to 122 by the end of January, and to 330 by the end of February. Up to mid April, altogether, 362 cases were reported, 7.97 percent of the population were affected. The prevalence of measles reached a peak in mid March, when 105 cases were reported within ten days.
2. The sources of disease: From the studies of the first two cases of measles reported in Liu-chiang ts'un, the patients were found to come from Mo-li and Wu-kang ts'uns, eight Chinese miles from there, five and seven days ago respectively. Those two places just were having a prevalence of measles. At that time in no other neighbouring ts'uns had been found any measles. From the evidence of the incubation period of this disease it is concluded that measles was brought into this Brigade from Mo-li and Wu-kang ts'uns.
3. The factors of propagation: The first two patients were not isolated immediately. Until the end of January, new cases were found but few people paid any attention to that. No preventive measures were made, nor was any report given to the higher disease-control institutions. Therefore, the number of cases increased rapidly in February. The public was then aroused. An isolation ward was set up in Liu-chiang ts'un in February 11; seven patients were admitted on that date, four of whom had complications with pneumonia.

The actual cases of measles were many more than these. The isolation ward is not in the central area and most sick children in the distant places (the longest distance had been ten Chinese miles) could not reach there and get treatment. In addition to that, the medical facilities were very poor there; no organized team could be used to do any survey or inspection in every ts'un. There was a general lack of health education, and patients were allowed to contact freely with people outside. There was practically no isolation measure.

As a result, the prevalence of measles reached a peak in mid March. Even at this moment, the local officials did not make any report to the higher disease-control institute. Only after measles had spread all over did they begin to make some reports to the City Committee members. Therefore, the propagation of measles this time was mainly due to the lack of prompt reporting of disease found and an effective control system.

4. The distribution of age and sex of the patients: Among the 362 cases, the youngest patients were two month old babies (two of them); the oldest one was thirty-one years old. There were 188 patients (38 percent) under two years old; 239 of them (66 percent) were under five years old; 346 of them (95.5 percent) were under ten years old; and only 16 patients (4.5 percent) were over eleven years old. The 2 two months old baby patients had comparatively light symptoms only; they recovered rather fast, and these were quite rare clinical cases.

There has been a report in [medical] literature about a ten day old infant who suffered from measles, and the symptoms were light also. Probably this is because the nervous system of a little baby has not fully developed, so there is a lower sensibility to this disease causing agent. But after all, babies have very little resistance to diseases, so they must be well protected.

In regard the sex distribution, there were 191 male (52.7 percent) and 171 female (47.3 percent) patients. The difference is not significant.

5. Complications or multiple diseases: (Table 2)

(a) Complications: 591 cases of diseases were found to be complicated with measles. Each patient had an average of 1.63 complications.

i. Conjunctivitis: The complication was 100 percent; most of them were more than moderate cases. The main reason of this was because more than 70 percent of the patients had had mild conjunctivitis before. Sanitation was poor. In addition to that, the climate there was very dry. There were abundant sandy winds. Therefore, when they had measles this disease became more severe.

ii. Laryngitis: 150 cases were found (41.4 percent). The reasons were because patients did not have enough or even had any water to drink, the dry season and the lack of habit of brushing teeth and wash mouth.

iii. Pneumonia: 55 cases were found (15.2 percent). The diagnosis was mainly according to a high fever, or a sudden drop of body temperature, a cough, a typical difficulty in breathing, shortness of oxygen and a murmur in the lung. Due to the lack of facilities, no fluoroscopy was made, and some milder cases might have been overlooked.

v. Oral inflammation: 17 cases were found (1.9 percent). The reasons for such a large number of complications have been found as follows:

(1) The patients we surveyed were all farm children. Their living conditions were very poor. The rooms were dark, the ventilation was insufficient, with a lot of things accumulated inside, clothes and bed sheets unwashed often, and most of them burned all kinds of wood to warm the house (more than 90 percent of them), so the rooms became smoky and dusty..

(2) The farmers there still had the old wrong ideas. They did not dare to wash the faces of their measles struck children. They were afraid to give them water to drink, and prohibited them to eat sugar, eggs and some other nutritive foods.

(3) Child patients do not have the habit of brushing their teeth, to take a bath, to have their hair cut and to change their clothes often. Frequently, they use their dirty hands to rub their eyes.

(4) More than 50 percent of the patients were not discovered and given treatment in the early stage. There was also a shortage of antibiotic drugs.

(5) Most patients were quite weak physically. Moreover, we found that more than 70 percent of them slept naked, and got up to the rest room naked (a habit of that place). Therefore, about 50 percent of them caught cold, thus increasing the chances of getting a complication.

(b) Multiple-occurring diseases: Among the 362 patients, 27 of them (7.5 percent) were found to have submaxillaryitis and 13 of them (3.6 percent) had whooping cough. The main reason was because no individual isolations were made, and patients infected one another.

IV. The cause of death: 11 out of 362 patients died, according to our survey (the mortality is 3.04 percent). The major cause was pneumonia. There were 20 percent of those 55 multiple-infected patients died. This percentage is a little higher than that has been reported in [medical] literature (15 percent). Two of them also had whooping cough. The main reasons why pneumonia had caused so many deaths were: (1) 11 of them were rather weak prior to death due to malnutrition. More than half of these 11 patients already had suffered from diarrhea. (2) It was usually too late for most of them when they were positively found to have pneumonia. This was related to delayed treatment and the poor medical standard. (3) Although some of them were found to have pneumonia early enough, they were not treated properly. (4) Inadequate nursing care was also an important cause of death.

Among the 11 patients who died, the two youngest ones were one year old, and the oldest one was thirteen years old (death from measles, pneumonia and whooping cough combined). There were five cases under the age of two (the mortality was 45.5 percent), three cases in the age groups of three to five and six years old each. These figures indicate that the younger patients have a higher mortality. The reported figure in [medical] literature is even higher (70 to 85 percent). They also indicate that measles complicated with pneumonia consists a strong threat to older children as well.

## V. Epidemic control measures:

### 1. Health education:

a. Door to door visits or meetings can be used to explain to the people the danger of measles.

b. Correcting their old superstitious thinking and teaching them proper methods in prevention and care of measles.

2. Strict isolation: According to the practical situation patients can be gathered in the isolation wards or isolated locally at home. Patients with different kinds of contagious diseases should not be put in the same isolation ward, as it has been wrongly before, so that there will be no cross infection.

3. Home visit: Organize people to become a medical group to visit, register and cure patients at home.

4. Medical prevention: The root soup of *Lithospermum officinale* [a plant yielding a red dye] can be used for children, especially those under four years old of age, to prevent the infection of measles.

5. A special fund must be appropriated for the purchasing of urgent drugs.

6. A large scale public health movement can be launched under the leadership of Party Committee members to clean up the environment indoors and outdoors.

## VI. Conclusion:

1. According to the facts stated above, the prevalence of measles at this time can be divided into three phases. The beginning of this disease was around mid-January 1959. The real onset of measles was in the end of January. It reached a peak in mid March, then declined and stopped in early April; 362 cases were reported (7.97 percent of the people). There was no significant difference regarding the numbers of male and female patients.

Their ages ranged from two months to thirty one years; 346 of them were under ten years old (consisting 95.5 percent). The younger ones appeared to be more susceptible. Eight of them (22 percent) were under one-half year old; among them: 2 two months, 2 four months, 1 five months and 3 six months old. These facts disprove some reports in [medical] literature that children under six months old have a natural immunity against measles; 591 cases of complications were found, with an average of 1.63 for each patient. Complications with conjuntivitis, laryngitis and pneumonia is 100, 41.4 and 15.2 percent respectively.

The main reasons for such a large number of complications were because housing, nutrition, sanitation and child care in the farm families was very poor. The dry climate and frequent sandy winds are part of the reason. There were 11 out of 362 patients died. Mortality was 3.04 percent. They all had complications of severe pneumonia and had a 20 percent mortality with such complication (55 cases), which was a little higher than that of other reports.

## 2. Experiences and suggestions:

i. The medical personnel in Huang-chuang Brigade failed to report the spreading of contagious disease; as a matter of fact they had never done this before, and the lack of strict isolation of patients caused the prevalence of measles at this time. Ordinarily, they were busy curing diseases but they did very little preventive work. This was also an important factor.

In view of this experience, great attention must be given to the health protection and disease prevention campaigns from now on. An effective system of disease reporting and control must be established to safeguard the health of the people and to achieve the Great Leap in agriculture.

ii. Some medical workers reportedly have used injections, especially penicillin, very freely. Although they knew the usage of those medicines, they were persuaded to use them by the patients' families. This not only did patients no good, but very often caused some dangerous reactions, and it was also an unnecessary large financial waste for the patients. Most people had an idea that oral medicine is not as good as injection. This generalization has to be corrected.

iii. We have really come to realize that epidemic control must depend on the leadership of local Party and Administrative officials. Medical workers with Chinese or western medicines shall be organized, and each one shall have his responsibility. The patients can be isolated in a concentration ward or isolated locally. The health education, the treatment and the prevention of diseases shall be carried on simultaneously. At the same time, the people shall be fully mobilized to participate in such a patriotic health movement in order to achieve good results.

Table 1. Number of Measles Patients From Mid-January to Early April

| Month             | <u>January</u> |       | <u>February</u> |       | <u>March</u> | <u>April</u> | <u>Total</u> |
|-------------------|----------------|-------|-----------------|-------|--------------|--------------|--------------|
| Date              | 1-10           | 11-20 | 1-10            | 11-20 | 1-10         | 11-20        | 1-10         |
| Case              | 0              | 2     | 20              | 49    | 51           | 105          | 32           |
| Date              | 21-31          |       | 21-28           |       | 21-31        |              |              |
| Case              | 16             |       | 35              |       | 52           |              |              |
| %/pop-<br>ulation | .38            |       | 2.29            |       | 4.6          | .7           | 7.97         |

Table 2. Complications and Multiple Diseases

|         | Compli-<br>cation | Conjun-<br>tivitis | Laryng-<br>itis | Pneumonia | Middle<br>ear | Oral<br>inflamma.<br>flamma. | Total |
|---------|-------------------|--------------------|-----------------|-----------|---------------|------------------------------|-------|
| Case    | 362               | 150                | 55              | 7         | 17            | 591                          |       |
| Percent | 100               | 41.4               | 15.2            | 1.9       | 4.7           | 1.63                         |       |

|         | Multiple<br>disease | Whooping<br>cough | Submax-<br>ilaritis | Chicken<br>pox | Diarrhea | Swelling<br>hip | Total |
|---------|---------------------|-------------------|---------------------|----------------|----------|-----------------|-------|
| Case    | 13                  | 14                | 2                   | 5              | 3        | 27              |       |
| Percent | 3.6                 | 3.9               | 0.6                 | 1.4            | 0.8      | 7.5             |       |

Note: If the same patient suffered from two or more diseases, each disease was counted as one case.

END